

REMARKS

Applicant respectfully requests reconsideration of the instant application in view of the amendments, herein, and the following remarks:

The following claims are *pending*: 13-28.

The following claim is *independent*: 13.

The following claims have previously been *cancelled* without prejudice or disclaimer: 1-12.

Please *cancel* the following claim without prejudice or disclaimer: 23.

Please *add new* claims 27 and 28 and please *amend* claim 13; although these claims have been amended herein to provide clarification, correct typographical inaccuracies and/or informalities, and/or to better track practical/commercial implementations/practices (hereinafter “amendment,” “amendments,” and/or “amended”), Applicant submits that the originally filed claims are patentable and reserves the right to pursue the originally filed claims (as well as any claims dependent therefrom) at a later time and/or in one or more continuation/divisional application(s). Applicant submits that these new claims and/or claim amendments are supported throughout the originally filed specification and that no new matter has been added by way of these amendments.

Claim Rejections - 35 U.S.C. § 103

The Office Action rejected claims 13, 14, 17-21 and 24-26 under 35 U.S.C. § 103(a), allegedly, as being unpatentable over Weaver et al., US Patent No. 6,267,883 (hereinafter

“Weaver”), in further view of Conkling, US Patent No. 4,248,690 (hereinafter “Conkling”), and in further view of Ditzler et al., U.S. Patent No. 5,215,375 (hereinafter “Ditzler”). The Office Action further rejected claims 15 and 16 under 35 U.S.C. § 103(a), allegedly, as being unpatentable over Weaver, in view of Conkling, in view of Ditzler and in further view of Long, Jr., U.S. Patent No. 7,135,155 (hereinafter “Long”). The Office Action also rejected claims 22 and 23 under 35 U.S.C. § 103(a), allegedly, as being unpatentable over Weaver, in view of Conkling, in view of Ditzler, and in further view of Hagarsh, U.S. Patent No. 3,677,522 (hereinafter “Hagarsh”).

Requirements to Establish Prima Facie Obviousness

The Supreme Court in *Graham v. John Deere Co. of Kansas City* prescribed that a *prima facie* showing of obviousness under 35 U.S.C. § 103 requires that, “the obviousness or nonobviousness of the subject matter [be] determined,” and details further requirements, commonly referred to as “Graham factors,” which include that “[1] the scope and content of the prior art [be] determined, [2] differences between the prior art and the claims at issue [be] ascertained, and [3] the level of ordinary skill in the pertinent art [be] resolved.” *Graham*, 383 U.S. at 1, 17 (1966). To comply with the Graham factors, as introduced in *Graham* and reaffirmed in *KSR Intern. Co. v. Teleflex Inc.*¹, MPEP § 706.02(j) prescribes that a rejection under 35 U.S.C. § 103 should set forth:

(A) the relevant teachings of the prior art relied upon, preferably

¹ The “[Graham] factors continue to define the inquiry.” 550 U.S. 398 (2007).

with reference to the relevant column or page number(s) and line number(s) where appropriate;
(B) the difference or differences in the claim over the applied reference(s);
(C) the proposed modification of the applied reference(s) to arrive at the claimed subject matter; and
(D) an explanation as to why the claimed invention would have been obvious to one of ordinary skill in the art at the time the invention was made.

The MPEP prescribes that, “when evaluating the scope of a claim, *every limitation in the claim must be considered*,” (§ 2106 II(C), emphasis added) and, “*All words in a claim must be considered in judging the patentability of that claim against the prior art*.” (§ 2143.03, emphasis added). Applicant submits that the pending rejection has failed to consider “every limitation in the claim” and “[a]ll words in [the] claim” in judging the patentability of the claim against the prior art by mischaracterizing claim elements and/or over-generalizing the applied reference(s). As with this Office Action, when the Examiner mischaracterizes and/or provides references that are missing claimed elements, then the Examiner has failed to fulfill MPEP § 706.02(j) requirements (A) and (B), and as a consequence, has failed to establish a *prima facie* case of obviousness. 35 U.S.C. § 103.

Missing Claim Element(s)

Applicant submits the cited references (taken alone or in combination) do **not** discuss, do **not** render obvious, and are in fact missing at least the following element(s) as recited, *inter alia*, in amended independent claim 13:

A water treatment unit comprising:

... wherein, the turbulence body is formed by two perforated plates which are arranged perpendicular to a direction of flow at a distance to each other, between which there is at least one perforated plate, and wherein the two perpendicular plates have a

cross-section approximately corresponding to an internal cross-section of the metallic casing.

The Office Action asserts the previously pending claimed elements are shown in Ditzler (Figures and col. 1, line 34 to col. 2, line 17) and alleges:

Ditzler et al. teach (see figures and col. 1, line 34 to col. 2, line 17) a device for inducing turbulent flow in a conduit and composed of a variety of perforated plates varyingly oriented in relation to each other. (Office Action, p. 3, § 3).

Applicant submits that Ditzler does not discuss or render obvious the claimed elements as amended.

In direct contrast to the claimed elements as amended, Applicant submits that Ditzler discusses *a shearing element 11 containing apertured baffles arranged at acute angles with respect to the direction of bulk flow such that the apertures shear the gas into smaller bubbles to facilitate dissolving of the gas*. For example, Applicant notes that Ditzler discusses the preferred orientation of the baffles with respect to the direction of the pipeline be between 20° and 70°:

[i]t is preferred that the baffles be other than perpendicular to the axis, and particularly preferred angles are 20° to 70° with respect to the central axis of the shearing element and thus approximately with respect to the axis of the pipeline [direction of flow]" (Ditzler, col. 1, line 56 - 61).

Further, Applicant also notes Ditzler discusses that the baffles are arranged to form zigzag flow paths (Ditzler, Figure 2) and that the zigzag arrangement of the baffles "... induces turbulent flow by directing fluid which does not pass through the apertures along sharply turning and changing flow paths [zigzag flow paths]." (Ditzler, col. 2, lines 7-10) (emphasis added). Applicant also notes that Ditzler discusses that the zigzag flow " ... in combination

with the tendency of the apertures to shear the gas bubbles, result[ing] in a highly effective way of creating very small bubbles, thereby increasing the gas-liquid interfacial area.” (Ditzler, col. 2, lines 13-17).

As such, Applicant submits that Ditzler’s *shearing element 11 with a zigzag arrangement of baffles which induces turbulent flow along a zigzag path* is fundamentally different from the claimed “... the turbulence body is formed by two holed perforated plates which are arranged perpendicular to a direction of flow at a distance to each other, between which there is at least one further perforated plate, and wherein the two perpendicular plates have a cross-section approximately corresponding to an internal cross-section of the metallic casing” as recited in amended claim 13. (Emphasis added).

Should the Examiner maintain the rejection, Applicant respectfully requests that the Examiner provide specific citations and explanations describing how each and every element of the pending claims are allegedly rendered obvious by the cited reference, providing indications of specific, alleged correspondences between claim elements and cited portions of the applied reference; more specifically, Applicant respectfully requests additional clarification as to how and specifically why the Examiner believes Ditzler discusses or renders obvious the claimed “... the turbulence body is formed by two perforated plates which are arranged perpendicular to a direction of flow at a distance to each other, between which there is at least one perforated plate, and wherein the two perpendicular plates have a cross-section approximately corresponding to an internal cross-section of the metallic casing” as recited in amended independent claim 13.

Similarly, Applicant submits that Weaver's core or casting made of a composition of metals (Weaver, Abstract) as illustrated in Figure 2 and Conkling's "electrode plate configuration through which the electrolyte is caused to flow in a vigorous and turbulent manner" (Conkling, Abstract) fail to remedy the deficiencies identified above in Ditzler with regard to amended independent claim 13 for at least the reasons discussed above. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections and allowance of the claim.

Furthermore, Applicant submits claims 14-22 and 24-26, which depend directly or indirectly from amended independent claim 13 are all patentable over the cited references (taken alone or in combination) for at least similar reasons as discussed above when identifying deficiencies in Ditzler with regard to amended independent claim 13. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejections and allowance of claims.

CONCLUSION

Applicant asserts that the above remarks, which distinguish the claims over the cited reference(s), pertained only to noted claim element portions. These remarks are believed to be sufficient to overcome the prior art to this Office Action (and/or any previous office action(s)) (hereinafter "Office Action(s)"). While many other claim elements and/or bases for rejection were not discussed, as they have been rendered moot based on the above amendments and/or remarks, Applicant asserts that all such remaining and not discussed claim elements and/or bases for rejection, all, also are distinguished over the prior art, and

Applicant reserves the opportunity to more particularly traverse, remark and/or distinguish over any such remaining claim elements and/or bases for rejection at a later time, should it become necessary. Further, any remarks that were made in response to the Office Action(s)' objection and/or rejection as to any one claim element, and which may have been re-asserted as applying to other Office Action(s) objection(s) and/or rejection(s) as to any other claim element(s), any such re-assertion(s) of remarks are not meant to imply that there is commonality about the structure, functionality, means, operation, and/or scope of any of the claim element(s), and no such commonality is admitted as a consequence of any such re-assertion(s) of remarks. Consequently, the reference(s) cited the Office Action(s) do not result in the claimed invention(s), there was/is no motivation, basis and/or rationale for such a combination of references (i.e., cited references do not teach, read on, suggest, or result in the claimed invention(s)), and the claimed invention(s) are not admitted to be prior art. Also, Applicant does not accept, admit, and/or concede to any assertions, (mis)characterizations (e.g., of claims, references, and/or otherwise), and/or Official Notice(s) in the Office Action(s). As such, Applicant does not concede that any claim element(s) have been anticipated and/or rendered obvious by any of the cited reference(s) and/or any Official Notice in the Office Action(s). Thus, the Applicant respectfully submits that the supporting remarks and claimed inventions, claims 13-28, all: overcome all rejections and/or objections as noted in the Office Action(s), are patentable over and discriminated from the cited reference(s), and are in a condition for allowance. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection(s) and/or objection(s), and allowance of all claims.

Authorization

Applicant hereby authorizes and requests that the Commissioner charge any additional fees that may be required for consideration of this and/or any accompanying and/or necessary papers to Deposit Account No. 03-1240, Order No. 17233.013. In the event that an extension of time is required (or which may be required in addition to that requested in a petition for an extension of time), Applicant requests that the Commissioner grant a petition for an extension of time required to make this response timely, and, Applicant hereby authorizes and requests that the Commissioner charge any fee or credit any overpayment for such an extension of time to Deposit Account No. 03-1240, Order No. 17233.013.

In the event that a telephone conference would facilitate examination of the application in any way, Applicant invites the Examiner to contact the undersigned at the number provided.

Respectfully submitted,
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